REMARKS

The examiner has rejected claims 1-3 and 14-15 under 35 U.S.C. 112 for the reasons stated in the office action. It is submitted that this ground of rejection has been overcome by the instant amendment. The polyamide species nylon-6 and nylon-6,6 are now presented in new dependent claim 16.

The examiner has rejected claims 1-3 and 15 under 35 U.S.C. 102 or 103 over Queen, et al (US 5,567,256) in view of Stahlecker, et al (US 4,484,433), Nomura, et al (US 5,611,819), Scott (US 4,668,552) and GB 2,205,166A. It is respectfully submitted that this ground of rejection is not well taken. In the first instance it is submitted that the fact that the examiner requires a combination of FIVE references in order to formulate the rejection is in and of itself indicative of the non-obviousness of the invention.

The amended claims provide a process for producing a yarn suitable for tufting, said process comprising the steps of:

a. forming a bundle consisting essentially of a first base fiber, said first base fiber being selected from the group consisting of polyamides, polyesters, polyolefins, cotton and wool;
b. ring spinning or wrap spinning the bundle of fiber with a second fiber comprising a heat-activated binder material having a melting point range substantially below that of the base fiber to form a yarn, wherein said heat activated binder material has a melting point range of 105° to 190°C under ambient conditions, such that the second fiber is wrapped around or inserted into the bundle of first base fibers;
c. twisting two or more of the yarns to form a plied yarn comprising 0.1 to 12 weight percent of the binder material;
d. heating the plied yarn sufficiently to melt the binder material and causing the binder material to flow to intersecting points with the first base fiber; followed by
e. cooling the plied yarn to solidify the binder material to thereby encapsulate and

bind the first base fiber and retain the twist in the plied yarn.

Please note that one first forms a bundle of first base fibers and then ring spins or wrap spins the bundle with the second fiber of heat-activated binder material to form a yarn At least two of the yarns are then twisted to form a plied yarn, heating to melt the binder material followed by cooling. It is submitted that the combination of prior art does not suggest this process absent an impermissible reconstruction of the art in light of applicant's disclosure.

Queen, et al forms a spun blend of cotton and polyester fibers followed by melting the polyester and impregnating it into the cotton. Although spinning is done to form a blended yarn, there is no teaching of ring spinning or wrap spinning a bundle of fibers with a second fiber such that the second fiber is wrapped around or inserted into the bundle of first base fibers. With regard to claims 14 and new claims 16-20, it should be noted that Queen, et al do not mention nylon fibers.

Nomura, et al shows that a regenerated fiber can be spun into a spun yarn with another fiber such as a polyester by ring spinning. However, there is no suggestion of a bundle base fiber of polyamides, polyesters, polyolefins, cotton or wool. There is no ring spinning or wrap spinning the fiber with a second fiber comprising a heat-activated binder material. There is no heating the yarn to melt any binder material and causing the binder material to flow to intersecting points with the first base fiber; followed by cooling the plied yarn to solidify the binder material to thereby encapsulate and bind the first base fiber and retain the twist in the plied yarn.

Stahlecker, et al shows wrapping a binder fiber around a *yarn* rather than a bundle of a base fiber. There is no ring spinning or wrap spinning a *bundle of fibers* with a second fiber *to form a yarn*; there is no suggestion that any of their fibers are selected from the group consisting of polyamides, polyesters, polyolefins, cotton and wool; there is no suggestion that their wrapping fiber is a melting, heat-activated binder material; there is

no heating to melt the binder material and causing the binder material to flow to intersecting points with the base fiber; followed by cooling to encapsulate and bind the base fiber and retain the twist in the yarn.

Scott pertains to wrapping a multi-strand binder yarn 12 around a multi-strand body yarn 11. The examiner takes the position that it is old in the art to conduct a wrap spinning operation to uniformly spiral wrap a binder yarn around a base yarn. This point may be true but it is irrelevant because in this reference there is no spinning a bundle of fibers with a second fiber to thereby *form* a yarn.

GB 2 205 116 pertains to wrapping a bonding agent in filament form around a preformed twisted pile yarn. There is no spinning a bundle of fibers with a second fiber to thereby *form* a yarn a required by the claims.

It is submitted that the examiner has not formed a *prima facie* case of obviousness. Even when the examiner attempts to reconstruct the art, the present invention is till not found. Certainly pieces of the invention and parts of the required steps are shown in the art, however, the invention as a whole is not suggested by the combination of references. For these reasons it is submitted that the rejection should be withdrawn.

The examiner has rejected claims 1-3 and 14-15 under 35 U.S.C. 102 or 103 over Stahlecker, et al (US 4,484,433), in view of Lofquist (US 5,478,624), Queen, et al (US 5,567,256), GB 2,205,166A and Scott (US 4,668,552). It is respectfully submitted that this ground of rejection is not well taken. In the first instance it is again submitted that the fact that the examiner requires a combination of FIVE references in order to formulate the rejection is in and of itself indicative of the non-obviousness of the invention.

Stahlecker, et al, Queen, et al, GB 2,205,166A and Scott have been discussed above and the arguments from above are repeated.

Stahlecker, et al shows wrapping a binder fiber around a *yarn* rather than a bundle of a base fiber. There is no ring spinning or wrap spinning a *bundle of fibers* with a second fiber *to form a yarn*. Queen, et al does not teach ring spinning or wrap spinning a bundle of fibers with a second fiber such that the second fiber is wrapped around or inserted into the bundle of first base fibers. GB 2 205 116 pertains to wrapping a bonding agent in filament form around a preformed twisted pile yarn. There is no spinning a bundle of fibers with a second fiber to thereby *form* a yarn a required by the claims. Scott pertains to wrapping a multi-strand binder yarn 12 around a multi-strand body yarn 11. There is no spinning a bundle of fibers with a second fiber to thereby *form* a yarn.

Lofquist is similar in materials to the present invention, however, as seen at column 3, lines 36-39, a binder fiber is blended with a base fiber by commingling. There is no mention of *ring spinning or wrap spinning* a bundle of fiber with a second fiber comprising a heat-activated binder material. In addition, it is submitted that Lofquist is not available as prior art to this application since at the time of their respective inventions, both were subject to an obligation of assignment to the same party, namely AlliedSignal Inc. (see 35 U.S.C. 103, last paragraph). Therefore the rejection based on this combination of references is not supportable.

To be sure, some of the individual steps within the instant sequence of steps have been used before in the art. In addition, certain combinations of some of the individual steps have also been known before. Broad categories of techniques of forming yarns; forming polyamide, polyester, polyolefin, cotton and wool fibers; ring spinning or wrap spinning; twisting yarns to form a plied yarn, melting binder fibers, are all known in the art. However, the particular sequence and combination of claimed steps is not known in the art. This particular combination of steps is not shown or suggested in the applied art and the examples of the application show the unexpected improvement achieved by this combination. The references cited by the examiner each certainly show some of the individual steps used in the instant process. However, in forming the rejection, the examiner then leaps to the conclusion that, in effect, all sequences of such steps, include

the particular one herein claimed must therefore be prima facie obvious. This is certainly not the case. This particular multistep process of this invention is not suggested by the art and the unexpected improvement is likewise not suggested. The ancient analogies that the combination of a safe is not obvious upon viewing the dial, and that the design of a building is not obvious from examining a pile of brick and mortar, apply here.

Applicant respectfully submits that the Examiner is looking beyond the teachings of the references. In the instant case, the motives in the references, as disclosed by the practices therein, are quite different from those in the instant invention. The present invention, therefore, is not made obvious by the combination the Examiner has suggested, and the 35 U.S.C. 103 rejections should, therefore, be overruled. "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." In re Geiger, 2 U.S.P.Q.2d 1276, 1278 (CAFC 1987).

The Examiner appears to be going to great lengths to locate and try to interrelate references involving yarn formation, but no matter how one applies or combines these references they do not teach using the specific sequence of steps in the claimed invention to attained the demonstrated benefits. The invention cannot be deemed unpatentable merely because, in a hindsight attempt to reconstruct the invention, one can find elements of it in the art; it must be shown that the invention as a whole was obvious at the time the invention was made without knowledge of the claimed invention. 35 U.S.C. 103. When selective combination of prior art references is needed to make an invention seem obvious, there must be something in the art to suggest that particular combination other than hindsight gleaned from the invention itself, something to suggest the desirability of the combination. Uniroyal, Inc. v. Rudkin-Wiley Corp., 5 U.S.P.Q.2d 1434, 1438 (CAFC 1988). Such a suggestion is absent in the cited references.

The Examiner's approach seems to be to cite a string of references, figuratively throw all the ingredients of the reference teachings in one pot, and then pull out whichever

ingredients are needed to reconstruct the claimed invention. How would one know which ingredients to combine absent the guidance provided in the present application? Where Applicants' teachings are needed to find the invention, the invention is not obvious. Obviousness is determined at the time the invention is made, not after reading Applicants' teaching. 35 U.S.C. 103. Citing references that merely indicate that isolated elements recited in the claims are known is not a sufficient basis for a conclusion of obviousness; there must be something that suggests the desirability of combining the references in a manner calculated to arrive at the claimed invention. Ex parte Hiyamizu, 10 U.S.P.Q.2d 1393, 1394 (PTO Bd. Pat. Ap. and Int., 1988).

It is urged that one skilled in the art would not be imbued with an inspiration to produce a yarn using the instant process sequence of steps upon a reading of the Queen, et al, Nomura, et al Stahlecker, et al, Lofquist, Queen, et al GB 2,205,166A and Scott references.

Claims 1-3 stand provisionally rejected for obviousness type double patenting over claims 16, 18 and 21 of serial number 08/933,822. It is respectfully submitted that this ground of rejection is not well taken. The claims of this application are of significantly different scope as compared to claims 16, 18 and 21 of serial number 08/933,822. In particular, this application requires a step (c) twisting two or more of the yarns to form a plied yarn comprising 0.1 to 12 weight percent of the binder material which does not appear in the claims of 08/933,822. It appears that the examiner is confusing double patenting with claim domination.

> By domination we refer, in accordance with established patent law terminology, to that phenomenon, which grows out of the fact that patents have claims, whereunder one patent has a broad or "generic" claim which "reads on" an invention defined by a narrower or more specific claim in another patent, the former dominating the latter because the more narrowly claimed invention cannot be practiced without infringing the broader claim. To use the words of which the board seemed to be enamored, the broader claim "embraces" or "encompasses the subject matter defined by the narrower claim. In possibly simpler terms, one patent dominates

> another if a claim of a first patent reads on a device built or practiced according to the second disclosure. This commonplace situation is not, per se, double patenting as the board seemed to think. *In Re Kaplan* 229 USPQ 678 (CCPA 1986) citing *In re Sarett* 140 USPQ 474 (CCPA 1964).

According to the Board of Appeals, an "obviousness" type double patenting rejection on the ground the claimed invention is unpatentably obvious over the claims of a U.S. patent having a common inventor is a judicially created doctrine, rather than a rejection under 35 USC 101. Ex parte Winquist et al. (POBA 1972) 177 USPQ 472. Claims of the application and of the commonly assigned patent are directed to the same invention if the differences in the claims "are sham rather than real, semantic rather than actual." In re Plank et al (CCPA 1968) 399 F2d 241, 158 USPQ 328. However, to support a double patenting rejection, the examiner must point out what claim in the commonly assigned application is to the same invention, not merely conclude the same invention is claimed. Ex parte Crissy et al. supra. The only issue is whether the claims of the application are claiming applicant's patented invention in different language. In re Conix et al (CCPA 1969) 405 F2d 1315, 160 USPQ 420; In re Eckel (CCPA 1968) 393 F2d 848, 157 USPQ 415; In re Faust et al (CCPA 1967) 378 F2d 966, 153 USPQ 813, (interpreting Hays v. Brenner (DC Cir 1966) 357 F2d 287, 148 USPQ 365).

In this case, the claims of 08/933,822 certainly do not suggest the combination of steps herein claimed including step (c) "twisting two or more of the yarns to form a plied yarn comprising 0.1 to 12 weight percent of the binder material". It is therefore submitted that the double patenting rejection should be withdrawn.

The undersigned respectfully requests re-examination of this application and believes it is now in condition for allowance. Such action is requested. If the examiner believes there is any matter which prevents allowance of the present application, it is requested that the

undersigned be contacted to arrange for an interview which may expedite prosecution.

Respectfully submitted,

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I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office (FAX No. 703- 872-9306) on November 20, 2003.

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